

PATENT

B. AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 13, line 10 and continuing through page 14, line 25 as follows:

Figure 2 shows a block diagram of a packet traveling between a client computer system and a server computer system through various routers. In the example shown, three routers (router 220, router 240, and router 260) are used to route packet 210 between client computer system 200 and server computer system 280. Packet 210 includes a header area and a data area. The header area indicates the source and destination addresses for the packet and any prioritization information. The data area of packet 210 includes the content being transmitted between the client and the server. The content may be a request (i.e., from the client to the server) or a response to a request (i.e., from the server to the client). Each router includes a queue identifying packets that have been received and that are waiting to be forwarded in order to reach their ultimate destination. Router 220 includes queue 230, router 240 includes queue 250, and router 260 includes queue 270. At each of the routers, packet 210 is added to the corresponding router queue. Each router includes a queue handling routine to process items in its queue. To provide prioritized service, the queue handling routine in each router reads the header portion of each packet to identify high priority packets. If a high priority packet is identified, logic within the queue handling routine is invoked to provide priority service to the identified packet. One priority service that the queue handling routine can provide regards packet dropping. When a queue becomes too busy and the memory allocated for the router's queue becomes full, some packets need to be dropped from the queue. When a packet is

PATENT

dropped, either client 200 or server 280 determines that a packet is missing and requests the other device to retransmit the missing packet. Consequently, retransmission of packets causes an ~~increased~~ increase in the overall transmission time needed to transmit the packet. The queue manager routine can avoid dropping high priority packets and, instead, drop lower priority packets waiting on the queue. Another way the queue manager routine can increase the throughput of high priority packets is by reordering the queue to put high priority packets toward the top of the queue. One type of reordering routine uses the amount of time a packet has waited on the queue and the packet's priority to determine a queue order. Those packets who have waited longer and those packets with higher priorities are thus moved toward the top of the queue, while packets that have newly entered the queue and packets with lower priorities are moved towards the end of the queue.

Please amend the paragraph beginning on page 21, line 5 and continuing through page 22, line 12 as follows:

One of the things that the client may decide to do in response to receiving pricing information 790 is request a service level change to increase the priority of packets sent and received by client computer 780. In order receive higher priority service, client computer 780 sends service level change request 795 through computer network 775 to network pricing server 700. Network pricing server 700 receives service change request 740 from computer network 775. Billing engine software 745 processes service change request 740. In one embodiment, price information returned in price information 790 is packaged

PATENT

with service change request 740 and used for billing information. In another embodiment (or if the pricing information is not included), billing engine 745 retrieves pricing data from pricing data store 735. A record is written to billing records data store 750 identifying the client and recording the pricing in effect during the upgraded service period and the timestamp when the upgrade service request was received and processed. Packets with the client as either the destination (recipient) or target (sender) are marked with priority heading information so that they travel in a prioritized fashion through network 775. When the client no longer wishes to use and pay for prioritized service, another service level change request 795 is sent by client through network 775 and received by network pricing server 700 as service change request 740, this time informing network pricing server 700 to stop the prioritized service. Billing engine 745 responds by writing data to billing records data store 750 recording the timestamp at which the client stopped using the prioritized service and by resetting the priority heading information so that the client's packets travel in a non-prioritized (normal) fashion through network 775. At the end of a billing cycle, billing records 750 are processed to calculate client bills including the amount owed for prioritized service during the billing period. This calculation is made by multiplying the pricing applicable to the client's service upgrade requests by the amount of time the client used the corresponding service upgrades.